to extremely high daily dose results (skewed distribution). The anomalies were addressed by conducting several analyses. The primary analysis included quantities from 6-27 ml/day and calculated mg/day DACON values as <0.6, 0.6-1.5=1.2, >1.5-2.1=1.8, and >1.8. Sensitivity analyses were conducted for: (A) all values, (B) quantity values "corrected" by corresponding price, (C) quantities corresponding exactly to 1.2 and 1.8 mg/day, (D) quantities with calculated DACONs between 0.6 and 1.8. Additional analyses were performed on excluded patients (N=30,098). **RESULTS:** On average, patients were 55 years old, 53% female, 60% from PPO plans. Comorbidities included hypertension (48%), cardiovascular disease (11%), obesity (10%), and neuropathy (9%). The DACON for primary analysis was 1.64 (34.4% at 1.2 mg/day; 64.2% at 1.8 mg/day). A sensitivity analysis of all positive claims (A) produced a DACON of 1.97 with 3% of claims >1.8 mg/day; additional DACON analyses were 1.63(B), 1.64(C), and 1.59(D). DACON primary analysis and all-value (A) analyses on liraglutide patients not meeting inclusion criteria were 1.65 and 1.95. **CONCLUSIONS:** Careful inspection of claims data distributions should guide methods used to arrive at reasonable, compelling findings for analyses even as simple as DACON. Liraglutide's DACON in use with type 2 DM ranged from 1.59 to 1.64.

PDB87

HEALTH CARE UTILIZATION AND DIRECT ECONOMIC BURDEN OF DIABETES PATIENTS UNDER ONE URBAN HEALTH INSURANCE SCHEME OF CHINA

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OBJECTIVES: The objective of the study was to measure the health care utilization and direct economic burden of diabetic patients covered by urban employee basic medical insurance (UEBMI) in urban China. **METHODS:** All diabetic patients enrolled in UEBMI in a sample city from 2009 through 2011 were included. Retrieved data included patient personal information, complications and co-morbidities (CCs), service utilization, total medical expense and expense reimbursed by the scheme. Descriptive analysis was employed to examine the service utilization and direct economic burden. **RESULTS:** There were 1695, 1824, and 2088 diabetic patients treated in the schemes from 2009 through 2011, respectively. The proportion of women was around 38% each year. The patients aged 50-80 accounted for about 80%. The percentages of chronic CCs increased year by year. Neuropathy, hypertension, and cardiovascular and cerebrovascular diseases were the top three CCs, accounting for 53.83%, 51.63%, and 28.40% in 2011, respectively. 63%-65% patients were managed by only oral glucose-lowering treatments. Each patient had the average of 30 outpatient visits and 1.5 hospitalization stays each year. In three years, average medical expense per patient was RMB 15,387, 16,817 and 18,714, respectively. A little more than 30% of total expenses were paid out-of-pocket by patients. Medicines accounted for over 74% of total expenses, but medicines for glycemic control only occupied 23%. The top 8 products most used for glucose control accounted for 79% of total medicine costs, in which, acarbose and metformin were ranked as the first two products, amounting to 34% of total medicine costs. **CONCLUSIONS:** Chronic CCs in diabetic patients brought higher medical service utilization. Direct economic burden and service utilization increased year by year. Medicines was the main expense, but used for other purposes rather than glycemic control. The rational use of medicines and CCs monitoring and management should be promoted in China.

DIABETES/ENDOCRINE DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PDB88

EXAMINING A THRESHOLD OF ADHERENCE TO ORAL HYPOGLYCEMIC AGENTS RELEVANT TO CLINICAL OUTCOMES IN DIABETES: A TREE-STRUCTURED SURVIVAL MODEL

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OBJECTIVES: A number of quality improvement efforts for chronic diseases are tied to patients achieving ≥80% annual refill adherence. However, there is little empirical evidence that this threshold optimally predicts important health outcomes overall or within different patient sub-groups. The optimal threshold may also vary by whether adherence is calculated using interval-based (e.g., measured over 365 days) or prescription-based (measured from first through last prescription) methods. We used a survival tree model to identify adherence thresholds to oral hypoglycemic agents (OHA) most associated with avoidance of hospitalizations in different subgroups of diabetes patients. **METHODS:** We obtained prescription drug and medical claims for 30,961 Pennsylvania Medicaid enrollees aged 18-64 years with diabetes and ≥2 OHA fills, who were continuously enrolled for 30 months from 2007-2011 (6 months before and 2 years after their first OHA prescription). Adherence rates were calculated during year 1 using interval- and prescription-based proportion of days covered (PDC). Survival tree models were fit to predict risk of all-cause hospitalization in year 2, and empirically identify a series of covariate-based binary split points to derive adherence thresholds that best discriminate hospitalization risk. **RESULTS:** Among the sample (mean age, 49 years; 67% female), mean PDCs were 0.64 (interval-based) and 0.77 (prescription-based). Twenty-four percent (n=7,472) of patients had ≥1 hospitalization. Among patients with no baseline hospitalizations or comorbidities, adherence cut points of 78% (interval-based) and 92% (prescription-based) optimally differentiated hospitalization risk, resulting in a 20% risk reduction with adherence above these levels. For patients with baseline hospitalizations or comorbidities, PDC did not significantly predict future hospitalization. **CONCLUSIONS:** Refill adherence thresholds may lack predictive validity in terms of hospitalization risk for patients with prior hospitalization or comorbidities. For healthier patients, adherence thresholds most predictive of hospitalization were not 80%, and were higher using prescription-based PDC (92%) than interval-based PDC (78%).

PDB89

ACUTE-PHASE PERSISTENCE WITH ANTIDEPRESSANT THERAPY AND ASSOCIATED MEDICATION COST AMONG PATIENTS WITH DIABETES: AN ANALYSIS OF COMMERCIALLY INSURED PATIENTS IN RHODE ISLAND

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OBJECTIVES: To measure the acute-phase persistence and cost of antidepressant therapy among commercially insured patients having diabetes. **METHODS:** We conducted a retrospective study among patients with diabetes receiving health insurance through Blue Cross & Blue Shield of RI between July 1, 2008–December 31, 2009. New users of antidepressants were defined as having no history of an antidepressant dispensing for at least 90 days preceding an incident antidepressant prescription. Patients that continued their medication for at least for 90 days were classified as persistent. We compared persistence rates according to the therapeutic class of antidepressant prescribed, and by users of brand versus generic products. A multivariate logistic regression model was developed to predict non-persistence with antidepressant therapy by antidepressant type (SSRI/non-SSRI), and by use of generic versus brand products. The average total prescription cost for the 90 day period was calculated and stratified by use of brand or generic antidepressants. **RESULTS:** We identified 743 patients with diabetes who were newly prescribed an antidepressant; a majority were prescribed SSRI antidepressants (52.5%), while 26% were prescribed a brand name antidepressant, and 432 (58%) patients were classified as non-persistent. Users of non-SSRI antidepressants were more likely to fail to persist (OR 1.57, 95% CI 1.16-2.12). For non-persistent patients, the average cost of therapy was $126.70 among users of brand antidepressants, while the average cost among users of generics was $17.10. Among persistent patients, the average cost among users of brand antidepressants was $461.4, while the average cost among users of generics was $70.80. **CONCLUSIONS:** In this population of commercially-insured patients having diabetes, acute-phase persistence with antidepressant therapy was higher among patients prescribed SSRI medications, while treatment costs differed substantially among those prescribed brand versus generic medications.

PDB90

DIABETES PATIENTS ARE MORE ADHERENT THAN PLANS REALIZE

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OBJECTIVES: Many retailers offer low cost generic prescriptions, which may mean Medicare patients pay cash for at least some Rxs. Plans typically have visibility only to adjudicated prescriptions and do not include cash prescriptions in their adherence metric. This research investigates whether adherence is actually higher than that reported in the Medicare Advantage Star Ratings. **METHODS:** Adheris® receives a nationally representative sample of prescription data, collected directly from retail pharmacies, containing roughly 40% of all U.S. retail prescription volume and 130 million unique patient IDs. The HIPAA-compliant, longitudinal data captures all prescriptions filled at the pharmacy, including all payment methods. The study cohort selected all patients filling at least one non-cash prescription in the oral diabetes category between January and September 2013. Patients were observed through December 2013. Exclusion criteria used by CMS for the 2013 Part D oral diabetes medication adherence metric were employed. Patient eligibility (requiring pharmacy use in the last quarter of the observation period) and a constant store panel were utilized to ensure completeness of patient data. Medicaid patients were excluded. Adherence was calculated using proportion of days covered (PDC). A patient is considered adherent if their PDC>=80%. PDC computed using only non-cash prescriptions is compared to PDC computed using all prescriptions (including cash) to determine the impact of cash prescriptions on average PDC and on the percentage of patients considered adherent. **RESULTS:** In patients 65+ with at least 1 cash prescription (n=62,454), including cash prescriptions improves average PDC by 14.89% (64.09-78.98%) and the percentage of adherent patients by 19.38% (40.92-60.30%). In all patients 65+ (n=483,740), the improvement is 1.92% (76.45-78.38%) and 2.50% (58.16-60.66%) respectively. **CONCLUSIONS:** Including cash prescriptions improves adherence rates reported by plans as part of the Star Ratings, indicating that patients are more adherent than other statistics indicate.

PDB91

LONG-TERM ADHERENCE AND PERSISTENCE WITH DPP-4I ENZYME INHIBITORS IN ADULTS WITH TYPE 2 DIABETES

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OBJECTIVES: Dipeptidyl peptidase-4 enzyme inhibitors (DPP-4is) are a class of oral antidiabetic medications approved to lower blood glucose in patients with type 2 diabetes (T2DM). This analysis compared adherence and persistence over 1-year and 2-year periods among T2DM patients initiating saxagliptin or sitagliptin, two DPP-4is. **METHODS:** Adults with T2DM in the MarketScan® US claims database who initiated saxagliptin or sitagliptin (index drug) between 1/1/2009-1/31/2012 with no use of DPP-4is in the previous year were included. 1 year continuous enrollment pre-initiation and 1 year post-initiation were required. A sub-group of patients had 2 years of post-initiation enrollment. Adherence was defined as proportion of days covered (adherent if ?0.80), and persistence was defined as time to discontinuation (end of days' supply of index drug prior to gap of 60 days). Logistic regression and proportional hazards regression models adjusted for demographic, clinical, and prescription characteristics. **RESULTS:** 11,219 saxagliptin patients and 49,400 sitagliptin patients met the study criteria. The subset with 2 years of follow-up consisted of 3,505 saxagliptin and 27,568 sitagliptin patients. There were significant differences